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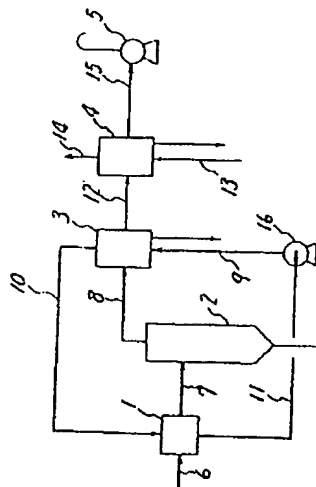
**B01D 1/00****B01D 1/22**(21) Application number: **82266417**(22) Date of filing: **23.10.87**(71) Applicant: **HITACHI LTD HITACHI TECHNO  
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KANEKIYO HIROSHI  
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WITH HEAT RECOVERY**

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(57) Abstract:

**PURPOSE:** To attain effective usage of heat, by using a refrigerant having a temp. range higher than raw material supplying temp. and lower than coagulation temp. of a high b.p. material for a partial condenser of high b.p. materials.

**CONSTITUTION:** Raw materials are introduced into a heater 1 for preheating through line 6, heated by a medium, and fed to an evaporator 2 through line 7. The generated vapor mixture of low and high b.p. materials are led to a partial condenser 3 for high b.p. materials through vapor exit line 8. Said medium is led to a pump 16 through a heat-medium exit 11 of said preheating heater 1 to increase the pressure, then led to said partial condenser 3 through a refrigerant entrance line 9 to be used as a refrigerant so as to coagulate a part of the vapor. The temp. of the refrigerant is increased by the amount of heat-exchange action and the refrigerant is taken out and circulated to said preheating heater 1 from refrigerant exit. Thus, heat is utilized effectively.

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